ANNUAL REPORT FOR 2003

Manteo Bypass Bridge Mitigation Site
Dare County
Project No. 8.T051403
TIP No. R-2551 A

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North Carolina Department of Transportation
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TABLE OF CONTENTS

FIGURES

APPENDICES

SUMMARY

The following report summarizes the monitoring activities that have occurred in the past year at the Manteo Bypass Bridge Restoration Site. The purpose of the site is to restore a brackish marsh system that was impacted by the Manteo Bypass Bridge construction (permit violation). The site was restored in August and September 1999. Monitoring activities for 2003 include the fourth year of vegetation monitoring for the site.

The mitigation encompasses approximately 0.128 acres of brackish marsh restoration. The restoration effort involved removing spoil deposited by the jetting of piles and monitoring the spoil removal area to ensure that natural regeneration of *Juncus roemerianus (blackneedle rush)* occurs. No hydrologic monitoring is required for this project; however, vegetation monitoring is required for five years.

Due to the lack of rapidly recovering/regenerating blackneedle rush, the Department planted the entire restoration area in May 2001 in an effort to "jump-start" the vegetation.

In 2003, the frequency of target species remained consistent at 100% and the vegetative coverage value improved to 4.6. This is above the required frequency (70%) stated in the success criteria. A scale value of 5 for the vegetative coverage is required for year five.

1.0 INTRODUCTION

1.1 Project Description

The Manteo Bypass Bridge Restoration Site is located immediately adjacent to the western terminus of the new bridge over the Croatan Sound associated with the Manteo Bypass (TIP R-2551A), as is shown in Figure 1. The site consists of approximately 0.128 acres and provides for the following types of mitigation:

Brackish Marsh Restoration

1.2 Purpose

The purpose of this report is to detail the vegetation monitoring in 2003 at the Manteo Bypass Bridge Restoration Site. No hydrologic monitoring is required for this particular site.

1.3 Project History

October 2000	Vegetation Monitoring (1 yr.)
May 2001	Site Planted
August 2001	Vegetation Monitoring (2 yr.)
July 2002	Vegetation Monitoring (3 yr.)
September 2003	Vegetation Monitoring (4 yr.)

FIGURE 1: SITE LOCATION MAP

Figure 1: Manteo Bypass Bridge Mitigation Site

2.0 VEGETATION: MANTEO BYPASS BRIDGE (YEAR 4 MONITORING)

2.1 Success Criteria

The vegetative success of this marsh site will be determined in accordance with NMFS Guidelines. Monitoring plots found to be located within the open water channel will not be evaluated, and will not count toward the final count of plots. The vegetation component of the wetland site will be deemed successful if the following criteria are met:

1. At year five, the average of all plots should have a scale value of 5 (75% vegetative cover) consisting of wetland herbaceous species, not including any invasive species.
2. A minimum of 70% of the plots shall contain the target (planted) species.

2.2 Description of Species

The following marsh grass species was planted in the Wetland Restoration Area:

Juncus roemerianus, Black Needle Rush

2.3 Results of Vegetation Monitoring

Plot #	Scale Factor	*Juncus roemerianus*	Frequency	Comments
1	4.0	▮	▮	
2	4.0	▮	▮	Cattail
3	4.0	▮	▮	
4	5.0	▮	▮	
5	4.0	▮	▮	
6	5.0	▮	▮	Sawgrass
7	4.0	▮	▮	
8	5.0	▮	▮	
9	5.0	▮	▮	
10	5.0	▮	▮	
11	0.0			Open Water
12	5.0	▮	▮	
13	5.0	▮	▮	
14	5.0	▮	▮	
15	5.0	▮	▮	
Frequency (Percentage of Plots with		100%	100%	
Desired Species)				
Sum Scale Value			65	
Total Number of Plots			14	
Vegetative Cover (Scale Value)			4.6	

2.4 Conclusions

Percent Frequency of Target Species (Black Needle Rush) **100%**
Frequency of 70% required.

Vegetative Cover Scale Value **4.6**
Scale Value of 5 required for year 5.

This marsh site is approximately 0.128 acres. The percent frequency meets the 70% requirement. The vegetative cover did not meet the requirement but is on track for the fourth year of monitoring.

NCDOT will continue vegetation monitoring at the Manteo Bypass Bridge Mitigation Site.

3.0 OVERALL CONCLUSIONS/RECOMENDATIONS

Based on the vegetation data provided in this report for the 2003 monitoring year, NCDOT proposes to continue vegetation monitoring for this site.

APPENDIX A

SITE PHOTOS & PHOTO LOCATION MAP

Manteo Bypass Bridge

Photo 1

Photo 2

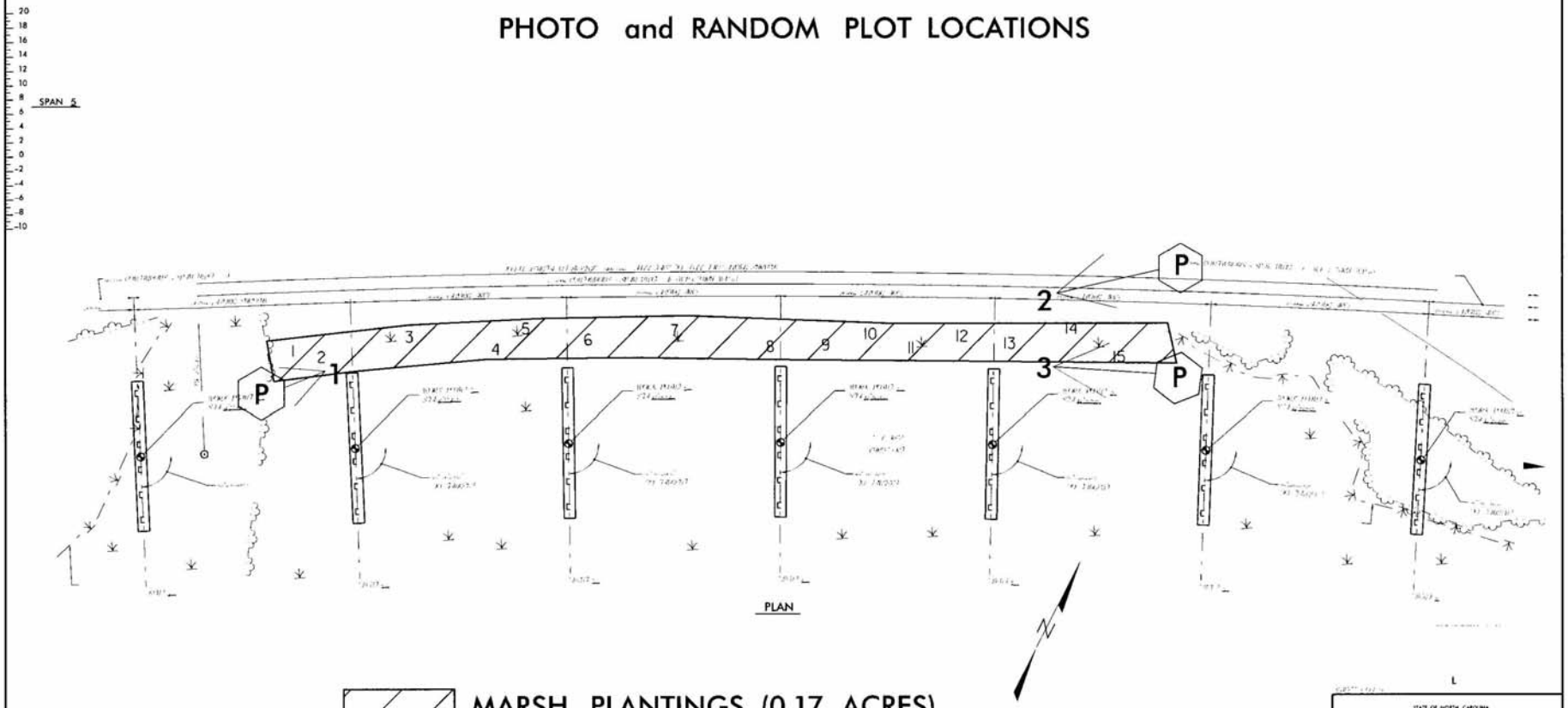
Photo 3

2003

WM–1

MANTEO BYPASS BRIDGE MARSH PLANTINGS

PHOTO and RANDOM PLOT LOCATIONS



MARSH PLANTINGS (0.17 ACRES)

(P) Photo Locations

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			